

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

APPLICANT: Rea et al. )  
S SERIAL NO.: 10/657,687 ) ) Examiner: V. Ronesi  
FILED: September 8, 2003 ) ) Art Unit: 1714  
TITLE: LUBRICATING OIL COMPOSITIONS )  
FOR MARINE ENGINES )  
Atty. Docket No. 2002L007A

Assistant Commissioner for Patents  
Washington, DC 20231

**REVISED BRIEF ON APPEAL**

Sir:

This is an appeal from the decision of the Examiner to finally reject claims 1 through 19, all claims remaining in the above-identified patent application. This final rejection was presented in an Office Action mailed August 31, 2006. The Notice of Appeal was filed November 29, 2006.

This brief is being filed in triplicate. It is requested that the requisite fee set forth in 37 CFR Section 1.17(f) be charged to Deposit Account No. 05-1710.

# REAL PARTY IN INTEREST

All rights to the above-identified application were assigned, via an unrecorded assignment, from the named inventors to Infineum International Limited, a company incorporated in England. Infineum International Limited is the real party in interest to these proceedings.

## **RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences relating to this application and no decision in any other appeal or interference impacts the decision in the present appeal.

**STATUS OF CLAIMS**

The application now contains claims 1 through 19, as set forth in the attached Appendix. Claims 1 through 19, all claims remaining in this application, stand rejected.

**STATUS OF AMENDMENTS FILED SUBSEQUENT TO FINAL REJECTION**

An Amendment after Final was filed on October 27, 2006 which only contained remarks and no amendments and considered by the Examiner. In light of the Amendment after Final, the Examiner reversed all but one of the previous rejections. The single remaining rejection is the subject of this Appeal Brief.

**SUMMARY OF THE CLAIMED SUBJECT MATTER**

The present invention is a lubricating oil composition suitable for use in a four stroke marine engine which comprises an oil of lubricating viscosity containing an admixture of (a) 1 - 3.75 wt.% of an ashless dispersant; (b) a metal detergent; (c) an oil soluble molybdenum compound in an amount sufficient to provide 15 - 1,000 ppm molybdenum in the composition; (d) a zinc dialkyl dithiophosphate in an amount sufficient to provide at least 1,200 ppm phosphorus in the composition; (e) a rust inhibitor system comprising (i) as a first rust inhibitor, an ethoxylated C<sub>4</sub>-C<sub>18</sub> alkyl phenol having 2-10 moles of ethylene oxide per mole in combination with a second rust inhibitor selected from the group consisting of (ii) a glycerol ester of a C<sub>8</sub>-C<sub>22</sub> fatty acid, (iii) a half ester of a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid and a C<sub>2</sub>-C<sub>4</sub> alkylene glycol and (iv) a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid or anhydride.

The ashless dispersant is described at page 4, line 5 to page 6, line 29. The metal detergent is described at page 6, line 30 to page 8, line 19. The oil soluble molybdenum compound is described at page 8, line 20 to page 13, line 13. The zinc dialkyl dithiophosphate is described at page 13, line 22 to page 14, line 24. The rust inhibitor system is described at page 14, line 25 to page 15, line 19.

**GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

- (1) Whether claims 1-19 are unpatentable on the ground of nonstatutory obvious-type double patenting over claims 1-14 of US Patent No. 6,642,188 alone or in view of Holubec.

The application now contains claims 1 through 19 that stand or fall together.

### ARGUMENT

The Examiner alleges claims 1-19 are unpatentable on the ground of nonstatutory obvious-type double patenting over claims 1-14 of US Patent No. 6,642,188 alone or in view of Holubec. The present invention as recited in independent claim 1 is a lubricating oil composition comprising a rust inhibitor system comprising (i) as a first rust inhibitor, an ethoxylated C<sub>4</sub>-C<sub>18</sub> alkyl phenol having 2-10 moles of ethylene oxide per mole in combination with a second rust inhibitor selected from the group consisting of (ii) a glycerol ester of a C<sub>8</sub>-C<sub>22</sub> fatty acid, (iii) a half ester of a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid and a C<sub>2</sub>-C<sub>4</sub> alkylene glycol and (iv) a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid or anhydride. The rust inhibitor system of the present invention is a specific **two component** system.

The Examiner alleges that the present invention comprising the recited rust inhibitor system is obvious in light of US Patent No. 6,642,188 alone or in view of Holubec. In an Advisory Action dated November 20, 2006, the Examiner stated “even though US Patent No. 6,642,188 does not explicitly claim or disclose mixtures of anti-rust agents, it is considered that it would have been well within the capabilities of one ordinary skill in the art to utilize mixtures, absent a showing of unexpected or surprising results regarding a synergistic effect”.

The Examiner’s allegation is incorrect. US Patent No. 6,642,188 teaches the following as examples of **individual** rust inhibitors: an ethoxylated nonylphenol or C<sub>4</sub>-C<sub>18</sub> alkyl phenol rust inhibitor; a fatty acid; an alkenyl succinate half ester; a fatty acid soap; ester of fatty acid and polyhydric alcohol; ethoxylated amines; a fatty acid amine; an oxidized paraffin; an alkyl polyoxyethylene ether; nonionic polyoxyalkylene polyols and esters thereof; other polyoxyalkylene phenols; anionic alkyl sulfonic acids; metal salts of alkyl naphthalene sulfonic acids such as “NA-SUL 129” which are commercially available from King Industries; and dialkyl hydrogen phosphites or phosphates.

US Patent No. 6,642,188 recites no less than 14 different types of rust inhibitors. See col. 8, lines 53-65. **The various rust inhibitors are listed individually with no mention that any mixture of the various, individual rust inhibitors can provide suitable rust inhibition for the invention.** The specification was written this way for a reason. The

reason being mixtures of all the listed rust inhibitors cannot provide suitable rust inhibition for the invention.

If we consider the present invention, for example, a mixture of two suitable rust inhibitors listed in US Patent No. 6,642,188, a fatty acid primary amine and a dodecynyl succinic anhydride, cannot provide suitable rust inhibition for the present invention. As one of skill in the art knows, when a fatty acid primary amine is mixed with a dodecynyl succinic anhydride, a succinimide can form. A succinimide cannot provide the rust inhibition required in the present invention.

Based on the above, it is clear the Examiner is trying to enforce “obvious to try” as the legal standard to be applied in this case. Obvious to try is not the law. For a proper obviousness rejection, there must be a teaching or suggestion. In US Patent No. 6,642,188, the patent draftsperson omitted “mixtures thereof” from the description of suitable, individual rust inhibitors. There was a reason for the omission. An inventor cannot just pick and choose individual rust inhibitors from the list of suitable rust inhibitors and mix them to form a satisfactory rust inhibitor system. Mixtures of all the listed rust inhibitors do not provide suitable rust inhibition properties.

In this instance, the Applicants have invented a **specific, two component** rust inhibitor system that provides improved rust inhibition properties to a lubricating oil composition. The rust inhibitor system comprises (i) as **a first rust inhibitor**, an ethoxylated C<sub>4</sub>-C<sub>18</sub> alkyl phenol having 2-10 moles of ethylene oxide per mole in combination with **a second rust inhibitor** selected from the group consisting of (ii) a glycerol ester of a C<sub>8</sub>-C<sub>22</sub> fatty acid, (iii) a half ester of a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid and a C<sub>2</sub>-C<sub>4</sub> alkylene glycol and (iv) a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid or anhydride.

Contrary to the Examiner’s allegations, US Patent No. 6,642,188 does not teach the **specific two component** rust inhibitor system as recited in claim 1. Not only is the specific two component rust inhibitor system of the present invention not taught by US Patent No. 6,642,188, US Patent No. 6,642,188 does not even teach the first rust inhibitor (i) and the second rust inhibitor (ii) on an individual basis with the requisite specificity to render claim 1 obvious. For example, US Patent No. 6,642,188 teaches a fatty acid is a rust inhibitor, but it does not teach glycerol ester of a C<sub>8</sub>-C<sub>22</sub> fatty acid as recited in claim 1.

No where in the specification of US Patent No. 6,642,188 is the specific two component rust inhibitor system as recited in claim 1 taught or suggested. Because the claimed rust inhibitor system provides superior rust inhibition properties which cannot be obtained by a random selection of known rust inhibitors listed in US Patent No. 6,642,188, the invention as recited in claim 1 is patentable over US Patent No. 6,642,188.

The Examiner further alleges that a combination of US Patent No. 6,642,188 and Holubec renders the present invention as recited in claim 1 obvious because Holubec teaches anti-rust additives for lubricant compositions which can be used as mixtures. Holubec teaches suitable anti-rust components can be aliphatic hydrocarbon substituted succinic acids, aliphatic hydrocarbon substituted succinic anhydrides and esterified reaction products obtained by the partial esterification of the aliphatic hydrocarbon substituted acids or their anhydrides with at least one alkylene oxide or alkylene glycol.

The teaching of Holubec relevant to rust inhibitors only adds to the list of possible rust inhibitors in US Patent No. 6,642,188 that one could pick and choose from in an **“obvious to try”** manner in an attempt to negate the patentability of the present invention. As stated above, **“obvious to try”** is not the law. The law requires a specific teaching to combine the first rust inhibitor (i) and the second rust inhibitor (ii) to form the rust inhibitor system recited in claim 1 of the present invention.

Similar to US Patent No. 6,642,188, Holubec does not even teach the first rust inhibitor (i) and the second rust inhibitor (ii) on an individual basis with the requisite specificity to render claim 1 obvious.

For the reasons discussed above, claim 1 is patentable over US Patent No. 6,642,188 either alone or in view of Holubec. US Patent No. 6,642,188 either alone or in view of Holubec does not teach the **specific two component rust inhibitor system** of the present invention. Because the claimed rust inhibitor system provides superior rust inhibition properties which cannot be obtained by a random selection of known rust inhibitors like the ones disclosed in US Patent No. 6,642,188 and in Holubec, the invention as recited in claim 1 is patentable over US Patent No. 6,642,188 in view of Holubec.

Claims 2-19, directly or indirectly, depend from claim 1 of the present invention and recite the invention in varying scope. For the reasons discussed above, US Patent No. 6,642,188, either alone or in combination with Holubec, does not teach or suggest the

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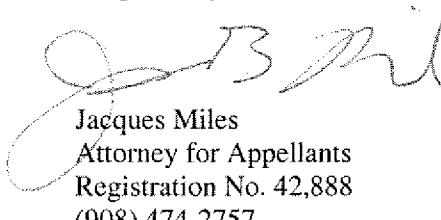
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lubricating oil composition comprising a rust inhibitor made up of (i) as a first rust inhibitor, an ethoxylated C<sub>4</sub>-C<sub>18</sub> alkyl phenol having 2-10 moles of ethylene oxide per mole in combination with a second rust inhibitor selected from the group consisting of (ii) a glycerol ester of a C<sub>8</sub>-C<sub>22</sub> fatty acid, (iii) a half ester of a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid and a C<sub>2</sub>-C<sub>4</sub> alkylene glycol and (iv) a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid or anhydride as recited in claim 1 and in varying scope by claims 2-19. As a result, claims 2-19 are patentable over US Patent No. 6,642,188 both alone and in view of Holubec.

#### **SUMMARY**

For the foregoing reasons, Appellants submit that US Patent No. 6,642,188 alone or in view of Holubec fail to render claims 1-19 unpatentable on the ground of nonstatutory obvious-type double patenting over claims 1-14 of US Patent No. 6,642,188 alone or in view of Holubec. Accordingly, Appellants request that the Examiner's decision to finally reject the claims of this application on the ground of nonstatutory obvious-type double patenting be reversed, and that the appealed claims be deemed allowable.

Respectfully submitted,



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**Claims Appendix**

This listing of claims will replace all prior versions and listings of claims in the application:

1. (original) A lubricating oil composition suitable for use in a four stroke marine engine which comprises an oil of lubricating viscosity containing an admixture of
  - (a) 1 - 3.75 wt.% of an ashless dispersant;
  - (b) a metal detergent;
  - (c) an oil soluble molybdenum compound in an amount sufficient to provide 15 - 1,000 ppm molybdenum in the composition;
  - (d) a zinc dialkyl dithiophosphate in an amount sufficient to provide at least 1,200 ppm phosphorus in the composition;
  - (e) a rust inhibitor system comprising (i) as a first rust inhibitor, an ethoxylated C<sub>4</sub>-C<sub>18</sub> alkyl phenol having 2-10 moles of ethylene oxide per mole in combination with a second rust inhibitor selected from the group consisting of (ii) a glycerol ester of a C<sub>8</sub>-C<sub>22</sub> fatty acid, (iii) a half ester of a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid and a C<sub>2</sub>-C<sub>4</sub> alkylene glycol and (iv) a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid or anhydride; and
  - (f) optionally, a viscosity modifier, said composition having a NOACK volatility less than 15%.
2. (original) The composition of claim 1 wherein the second rust inhibitor is the glycerol ester and the composition further comprises a third rust inhibitor selected from the group consisting of (i) a half ester of a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid and a C<sub>2</sub>-C<sub>4</sub> alkylene glycol and (ii) a C<sub>8</sub>-C<sub>22</sub> alkyl or alkenyl succinic acid or anhydride.
3. (original) The composition of claim 1 wherein the glycerol ester is a mixture comprising about 55 wt.% glycerol monooleate, 40 wt.% glycerol dioleate and about 5 wt.% glycerol trioleate.

4. (previously presented) The composition of claim 1 wherein the ethoxylated alkyl phenol is a 4 mole ethoxylate of nonylphenol.
5. (original) The composition of claim 1 wherein the half ester is propylene glycol dodecyl succinate.
6. (original) The composition of claim 1 wherein the alkyl or alkenyl succinic acid or anhydride is dodecyl or isomerized octadecenyl succinic acid anhydride.
7. (original) The composition of claim 1 wherein each rust inhibitor is present in a range of 0.05 to 1.5 wt.% of the composition.
8. (original) The composition of claim 4 wherein the second rust inhibitor is dodecyl succinic acid, and each rust inhibitor is present in the range of 0.10 to 0.40 wt.%.
9. (previously presented) The composition of claim 1 wherein the metal detergent is a calcium sulfonate or a calcium phenate or a mixture thereof.
10. (original) The composition of claim 1 wherein the dispersant is a polyisobut enyl succinimide wherein the polyisobut enyl has an Mn of 1600-2500.
11. (original) The composition of claim 1 wherein the molybdenum compound is a molybdenum dithiocarbamate.
12. (original) The composition of claim 1 wherein the molybdenum compound is a trinuclear compound of the formula  $Mo_3S_kL_nQ_z$  wherein L represents oil soluble organo groups, n is 1-4, k is 4-7 and Q is a neutral electron donating compound and z is 0.5.
13. (original) The composition of claim 1 wherein the zinc dialkyl dithiophosphate is present in an amount sufficient to provide up to 2,000 ppm P in the composition.

14. (original) The composition of claim 13 wherein the zinc dialkyl dithiophosphate comprises secondary alkyl groups having 2 to 8 carbon atoms.
15. (original) The composition of claim 1 wherein the viscosity modifier is shear stable and is present in an amount of 0.5 to 5.0 wt.%.
16. (original) The composition of claim 1 further comprising one or more phosphorus-free antioxidants.
17. (original) The composition of claim 1 further comprising an antifoam agent.
18. (original) The composition of claim 1 further comprising a lube oil flow improver.
19. (previously presented) A method of operating and lubricating a four cycle marine engine which comprises supplying to the engine with a lubricating oil composition according to any of claims 1-18.

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**Evidence Appendix**

None

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**Related Proceedings Appendix**

None